Title: Zinc-iron flow battery architecture
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Achieving high areal capacity in zinc-based flow batteries is currently hindered by the tendency of zinc to accumulate at the membrane-electrode interface. This study proposes a solution ...

Herein, sodium citrate (Cit) was introduced to coordinate with Zn 2+, which effectively alleviated the crossover and precipitation issues. Meanwhile, the redox species exhibited ...

Alkaline zinc-iron flow battery is a promising technology for electrochemical energy storage. In this study, we present a high-performance alkaline zinc-iron flow battery in combination ...

Given these challenges, this review reports the optimization of the electrolyte, electrode, membrane/separator, battery structure, and numerical simulations, aiming to promote the ...

In this perspective, we attempt to provide a comprehensive overview of battery components, cell stacks, and demonstration systems for zinc-based flow batteries.

Herein, dense Cu@Cu 6 Sn 5 core-shell nanoparticles are constructed on graphite felt (Cu@Cu 6 Sn 5 /GF) to induce zinc plating and inhibit the HER simultaneously. The charge transfer ...

In this perspective, we will first provide a brief introduction and discussion of alkaline zinc-based flow batteries. Then we focus on these batteries from the perspective of their current status, ...

In recent years, researchers have addressed these issues through advances in electrolyte, membrane, and electrode engineering, leading to a series of technological breakthroughs ...

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